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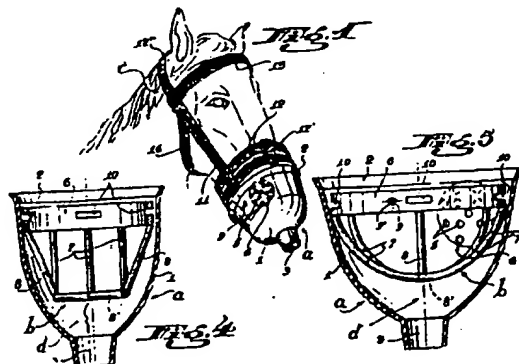
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(54) Titulo: MEJORAS EN BOZALES PROTECTORES, PARA CABALLOS.

(57) Resumen: Mejoras en bozales protectores, para caballos; que comprende una rejilla curviforme la cual, delimitando una concavidad receptora del hocico del animal, tiene su nacimiento en un aro que constituye el anclaje de un correa de sujecion cabesal; la rejilla esta calzada en la cavidad de un cuerpo acopado cuyas paredes exteriores con medios de ventilacion lateral, terminan en un fondo desde el que centralmente se proyecta hacia el exterior, una boquilla tubular abierta por ambos extremos; estando la rejilla dispuesta a una cierta distancia del fondo, en calidad de separadora del hocico con respecto a la boquilla; y teniendo tanto la rejilla como las paredes del cuerpo acopado, medios de vinculacion reciproca.



L.S. [Stamped: Directorate  
of Technology, Quality  
and Industrial Property - Sheets 1 to 13]

LETTERS   PATENT

relating to

Improvements in Protective Muzzles, for Horses

Holder:   Gavina Naon, Alfredo

Term:   15 years

I. -   STATEMENT OF REASONS

The present invention relates to items of auxiliary equipment, for horses in general, and refers more particularly to improvements in protective muzzles, likewise for horses, its object being that of offering an instrumentality which, fitted to the animal in a simple and secure way, protects said animal from certain habits which are harmful to it, while also protecting the items present in its immediate surroundings.

The animal is vulnerable to certain habits which, developing either spontaneously or in response to some problems that it is experiencing, entail various adverse effects. Moreover, some of these problems are of such magnitude that they jeopardize the health of the animal itself.

Thus, there are those horses which, for reasons of nervousness or idiosyncrasies, are apt to bite everything within reach: the gates of stalls or stockades, ropes and harnesses, as well as other animals and even persons.

Likewise known are certain horses, given to excessive enteric ventilation (called "air-swallowers"), that induce the intake of air by a relaxation of the larynx.

And there are those horses that not only bite, but that swallow or aspirate whatever may come into contact with the mouth: pieces of wood, ropes, rags, sand, soil, sawdust, strings, waste matter, etc.

A classic case is that of sawdust being aspirated from the animal's bedding.

As is easy to imagine, the ingestion of all these kinds of materials and items can cause severe disturbances in the animal, ranging from acute abdominal pains to diarrhea and intestinal obstructions which latter, in the case of plastics and other non-biodegradable materials, may lead to the death of the animal.

In order to prevent this, attempts have been made to apply to the horse's snout certain masking muzzles of leather or cloth, such as are employed as "nose bags" for the measured feeding of oats, vitamins, etc.

However, if it is kept in mind that the horse must also breathe through its snout (via the nostrils and lips), it is easy to understand that the application of these artefacts may serve no better purpose than to impede respiration, and that occasionally they may even end up by being ingested.

These muzzles have also been provided with openings, which may in effect constitute passageways for items to be aspirated.

Also familiar are muzzles consisting of a metal lattice which is fastened to the head around the snout; these devices, although they may prevent the animal from biting and nibbling, and are not an obstacle to its breathing, still do not impede it from aspirating soil, sand or small objects and, fundamentally, the sawdust that serves as its bedding in the stalls.

The invention that is the object of the present descriptive memorandum provides for a new type of muzzle: one that combines the advantages of a lattice, with a trumpet or external body of plastic, open at its extremity by means of a projecting mouthpiece, and ventilated also along its sides (thereby ensuring that the animal will be able to breathe perfectly).

To this it should also be added that the lattice, installed within the aforesaid body, is sufficiently remote from the open extremity to

prevent the animal from aspirating objects — or, even if they were to be aspirated, they still cannot be accessed by its mouth, which is retained by the lattice.

Given the open character of the lattice, the metal of which it is composed and the plastic of the main body, as well as the fact that both parts can be disassembled with consummate ease, the device as a whole is simple to keep clean, whether it is used continuously on a single horse or if it is to be switched from one animal to another.

For all these reasons it is easy to imagine just how well the device in question will be accepted when it is put into practical use, whatever the context and purpose to which it may be assigned, because, in light of its defining characteristics, it lends itself equally well to applications for the transport of horses by truck, to their normal training or activity, or to their resting in the stalls.

## II. - PRINCIPAL OBJECT

For the purposes specified above, and as improvements which are being claimed in protective muzzles, for horses, the muzzles under discussion are of the type that comprises a curvilinear lattice which, serving to delimit a cavity that accommodates the snout of the animal, originates in a hoop (6) which constitutes the anchoring element of a system of belts (c) to secure the animal's head, characterized in that the lattice (b) is wedged into the cavity (d) of a cup-shaped body (a), the external walls (1) of which, with means of lateral ventilation (5), terminate in a base from the center of which there projects outwards a tubular mouthpiece (3) which is open at both ends, with said lattice (b) being situated at a certain distance from the base, so as to act as a means for keeping the snout separate from the mouthpiece(3), and with both the lattice (b) and the walls of the cup-shaped body (a) having means (9) whereby they can be connected to each other.

## III. - ILLUSTRATIONS

In order that the object of the invention may be more clearly comprehended, it is illustrated herein with various figures, in which one of its preferred embodiments has been represented, simply by way of exemplification, not entailing any limitation, and in which:

- (9) = wing screw-nut (means of reciprocal connection between -a- and -b-)
- (9') = perforation for the passage of (9) into (6)
- (10) = elongated belt-accommodating slots of (6)
- (11) = head-retaining belt
- (11') = terminal points of anchoring element of (11) in (10)
- (11'') = buckle for adjustments
- (12) = snout-retaining belts
- (12') = transverse belts for coupling between (12) and (12)
- (12'') = headpiece
- (13) = forehead-retaining belt
- (14) = neck-retaining belt
- (14') = buckle for adjustments

#### IV. - DESCRIPTION

Expressed in general terms, (a) is an external body which derives its structure from a single piece of plastic material and inside of which a metal lattice (b) is fastened, thereby forming an entire unit which is secured to the head of the animal by means of a system of belts (c).

In greater detail, and as may be seen in the figures, said body (a) is cup-shaped or arched in the manner of a funnel, approximately oval in its plane, and presenting a concavity (2) which is delimited by the lateral walls (1), said concavity being open at its upper portion (so as to serve as access in its interior to the head of the animal), and terminating at its opposite portion by a rounded base which is prolonged externally in the form of a tubular mouthpiece (3), which projects outwards (Figures 1 to 3), said body being open at both of its extremities (Figures 4 and 5).

In the way, said body (a) provides the animal with ventilation of twofold character: one source of ventilation, situated distally, is afforded by the abovementioned open mouthpiece (3); and the other is situated laterally, on both sides, in zones (4) which are close to the position of the animal's snout (Figures 1 and 2) and which are penetrated all the way through by multiple perforations (5).

As regards the lattice (b), which is, as already mentioned, made of metal — structured from steel or the like —, it comprises an upper ring or hoop (6), to which are welded the curved ribs (7) and the lateral ribs (8), each of which, as if to constitute a base, is prolonged by a header-rib (8'), which latter proceeds across the curved ribs (7), as shown in Figures 4 and 5.

A sequence of elongated slots or openings (10) is arranged in the hoop (6), thereby permitting the terminal points (11') of both head-retaining belts (11) to be anchored, by way of said slots or openings, to said hoop. These head-retaining belts (11) partly embrace the top of the animal's head together with the headpiece-spans (12"), while at the opposite lower extremity they are connected with snout-retaining belts (12) which are, in turn, connected to each other by the transverse belts (12'), as shown in Figures 2 and 3.

A forehead-retaining belt (13) and a neck-retaining belt (14) serve to complete the device as a whole, which also includes a buckle (11") for adjustment and a strap (14') for adjusting the system of belts (c) to the head of the animal, as is shown in Figure 1.

On the other hand, the lattice (b) and the cup-shaped external body (a) are connected to each other by means of wing-screws (9) which pass through perforations (9') and terminate externally with wing-nuts (Figures 1, 2, 3 and 5); this feature permits the easy assembly and disassembly of the two parts, so as to facilitate the hygienic maintenance of the entire device.

As may be observed in Figures 4 and 5, when the lattice (b) has been installed within the cavity (2) formed by the cup-shaped external body (a), and when said lattice and said body have been fastened together by the screws and nuts (9), the lower portion (8') of said lattice (b) is then distanced from the extreme point of the mouthpiece (3) by a space (d) of such magnitude that it serves to separate the mouth of the animal sufficiently from the soil or from nearby objects, with the result that in this way the animal cannot bite or aspirate them, while at the same time its normal breathing through (3) and (5) will not be affected.

When the present invention is put into practical use, it will doubtless be possible to introduce modifications in regard to certain details

of its construction and form, but without this implying any departure from the fundamental principles which are clearly substantiated in the following Claims.

## V. - C L A I M S

The nature of the present invention having been thus particularly described and ascertained, and in such a way that it can be put into practice, exclusive right and property are herewith claimed for:

1. - Improvements in protective muzzles, for horses; of the type that comprises a curvilinear lattice which, serving to delimit a cavity that accommodates the snout of the animal, originates in a hoop which constitutes the anchoring element of a system of belts for securing the animal's head, characterized in that the lattice is wedged into the cavity of a cup-shaped body, the external walls of which, with means of lateral ventilation, terminate in a base from the center of which there projects outwards a tubular mouthpiece which is open at both ends, with said lattice being situated at a certain distance from the base, so as to act as a means for separating the snout from the mouthpiece, and with both the lattice and the walls of the cup-shaped body having means whereby they can be connected to each other.

2. - Improvements in protective muzzles, for horses: in accordance with Claim 1, characterized in that the lattice derives its structure from intercrossed metal rods which have their source in a hoop of the same material.

3. - Improvements in protective muzzles, for horses: in accordance with Claim 1, characterized in that the cup-shaped body derives its structure from a plastic material.

4. - Improvements in protective muzzles, for horses: in accordance with Claim 1, characterized in that the means of reciprocal connection between the cup-shaped body and the lattice are penetrating screws which, commencing from said lattice, pass through the walls of the aforesaid cup-shaped body until they are finally secured by means of matching wing-nuts.

5. - Improvements in protective muzzles, for horses: in accordance with Claim 1, characterized in that the means of lateral ventilation consist of a set of opening on each side, which openings are cut into the lateral walls of the cup-shaped body and are situated at each side of the snout.

6. - Improvements in protective muzzles, for horses: wholly in accordance with the preceding Claims, and essentially as has been described and illustrated in the documentation attached hereto.